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|--------------------------|-----------------|-------------------------|--|
| Interview Summary | Application No. | Applicant(s) | |
| | 10/590,496 | PICOLLET-D'HAHAN ET AL. | |
| | Examiner | Art Unit | |
| | Nelson Yang | 1641 | |

All participants (applicant, applicant's representative, PTO personnel):

(1) Nelson Yang

(3) Gholz 

(2) _____

(4) _____

Date of Interview: 7/9/08

Type: a) ☐ Telephonic b) ☐ Video Conference
c) ☒ Personal [copy given to: 1) ☐ applicant 2) ☒ applicant's representative]

Exhibit shown or demonstration conducted: d) ☐ Yes e) ☐ No.

If Yes, brief description: _____

Claim(s) discussed: all of record, proposed claims

Identification of prior art discussed: all of record

Agreement with respect to the claims f) ☐ was reached. g) ☐ was not reached. h) ☒ N/A.

Substance of Interview including description of the general nature of what was agreed to if an agreement was reached, or any other comments: _____

(A fuller description, if necessary, and a copy of the amendments which the examiner agreed would render the claims allowable, if available, must be attached. Also, where no copy of the amendments that would render the claims allowable is available, a summary thereof must be attached.)

THE FORMAL WRITTEN REPLY TO THE LAST OFFICE ACTION MUST INCLUDE THE SUBSTANCE OF THE INTERVIEW. (See MPEP Section 713.04). If a reply to the last Office action has already been filed, APPLICANT IS GIVEN A NON-EXTENDABLE PERIOD OF THE LONGER OF ONE MONTH OR THIRTY DAYS FROM THIS INTERVIEW DATE, OR THE MAILING DATE OF THIS INTERVIEW SUMMARY FORM, WHICHEVER IS LATER, TO FILE A STATEMENT OF THE SUBSTANCE OF THE INTERVIEW. See Summary of Record of Interview requirements on reverse side or on attached sheet.

applicant discussed proposed amendments to overcome the prior art rejection, particularly that w/ respect to Hirschfeld et al which the office agreed would overcome the prior art rejections

Examiner Note: You must sign this form unless it is an Attachment to a signed Office action.

Examiner's signature, if required

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DOCKET NO: 295393US2PCT

IN THE UNITED STATES PATENT & TRADEMARK OFFICE

IN RE APPLICATION OF :

NATHALIE PICOLLET-D'HAHAN, ET : EXAMINER: YANG, NELSON C.
AL.

SERIAL NO: 10/590,496 :

FILED: JANUARY 17, 2007 : GROUP ART UNIT: 1641

FOR: METHOD AND DEVICE FOR :
CONTROLLING THE POSITIONING OF
A BIOLOGICAL ELEMENT ON A
SUPPORT

AMENDMENT

COMMISSIONER FOR PATENTS
ALEXANDRIA, VIRGINIA 22313

SIR:

In response to the Office Action dated January 15, 2008, please amend the above-identified application as follows:

Amendments to the Claims are reflected in the listing of claims which begins on page 2 of this paper.

Remarks/Arguments begin on page 8 of this paper.

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IN THE CLAIMS

Please amend the claims as follows:

Claims 1-27 (Cancelled).

Claim 28 (Currently Amended): A method for controlling ~~positioning~~ sealing of a biological element on ~~a zone of edges of a through-opening made in~~ a support, in which the biological element is labeled with a tracer that emits a light radiation, the support comprises a layer of a material capable of trapping the light radiation, and the ~~zone of the support edges of the through-opening~~ on which the biological element is ~~positioned~~ is sealed are located in ~~[[a]] the layer of a material capable of trapping the light radiation~~, the method comprising:

- a) ~~positioning~~ sealing the biological element on the ~~zone of the support edges of the through-opening~~ by creating a low pressure in the through-opening;
- b) measuring intensity of light radiation trapped in the layer; and
- c) ~~determining positioning~~ controlling sealing of the biological element by comparing the intensity thus measured with at least one reference value;

wherein a) ~~[[,]]~~ and b) ~~and c)~~ can be carried out successively or simultaneously.

Claim 29 (Previously Presented): A method according to Claim 28, in which the biological element is labeled with a fluorescent tracer.

Claim 30 (Currently Amended): A method according to Claim 29, in which the fluorescent tracer is:

- a) ~~[[is]]~~ an organic fluorophore chemically coupled to one or more membrane proteins of the biological element,

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b) an antibody labeled with an organic fluorophore, which is directed against a membrane protein of the biological element and which is attached to the biological element by an antigen-antibody reaction, or

c) a fluorescent membrane protein which is expressed by the biological element.

Claim 31 (Currently Amended): A method according to Claim 28, in which the layer of material capable of trapping the light radiation is made of:

- a) [[an]] organic or mineral glass,
- b) [[of]] silica,
- c) [[of]] silicon nitride,
- d) [[of]] titanium dioxide,
- e) [[of]] hafnium dioxide,
- f) [[of]] alumina,
- g) [[of]] silica loaded with potassium or silver ions, or
- h) [[of]] a synthetic polymer.

Claim 32 (Previously Presented): A method according to Claim 28, further comprising, prior to a) or between a) and b), providing the support with means for extracting the light radiation trapped in the layer of material capable of trapping the light radiation.

Claim 33 (Currently Amended): A method according to Claim 32, further comprising, prior to a) or between a) and b), placing, opposite the layer of material capable of trapping [[a]] the light radiation, means for collecting the light radiation extracted from the layer.

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Claims 34 and 35 (Cancelled).

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Claim 36 (Currently Amended): A method according to Claim 35, in which a) [[,]]
and b) and e) are carried out simultaneously.

Claim 37 (Previously Presented): A method according to Claim 28, in which the
biological element is a cell.

Claim 38 (Withdrawn): A device for controlling positioning of at least one biological
element on at least one zone of a support, comprising:

a support comprising a layer of a material capable of trapping a light radiation
designed to be emitted by the biological element, and means for extracting the light radiation
trapped in the layer, the zone of the support being located in the layer; and
means for measuring intensity of light radiation extracted from the layer.

Claim 39 (Withdrawn): A device according to Claim 38, in which the support is a
tube open at both its ends and the zone on which the biological element is positioned is one of
the openings of the tube.

Claim 40 (Withdrawn): A device according to Claim 39, in which the support is a
micropipette configured for implementation of a patch-clamp technique.

Claim 41 (Withdrawn): A device according to Claim 38, in which the support is a
planar support and the zone on which the biological element is positioned is an opening of the
support.

Claim 42 (Withdrawn): A device according to Claim 41, in which the opening is a
through-opening.

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Claim 43 (Withdrawn): A device according to Claim 42, in which the support is a planar support configured for implementation of a patch-clamp technique.

Claim 44 (Withdrawn): A device according to Claim 38, in which the layer of material capable of trapping the light radiation is made of an organic or mineral glass, of silica, of silicon nitride, of titanium dioxide, of hafnium dioxide, of alumina, of silica loaded with potassium or silver ions, or of a synthetic polymer.

Claim 45 (Withdrawn): A device according to Claim 38, in which the layer of material capable of trapping the light radiation has a thickness of at least 200 nm.

Claim 46 (Withdrawn): A device according to Claim 38, in which the means for extracting the light radiation includes a raised area or a hollow or a series of raised areas and of hollows made in one of faces of the layer of material capable of trapping the light radiation.

Claim 47 (Withdrawn): A device according to Claim 38, in which the means for extracting the light radiation includes a component placed on one of faces of the layer capable of trapping the light radiation, and which forms, on the one face, a raised area or a series of raised areas and of hollows.

Claim 48 (Withdrawn): A device according to Claim 38, in which the means for extracting the light radiation includes a material deposited onto one of faces of the layer capable of trapping the light radiation, at one or more points of the one face.

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Claim 49 (Withdrawn): A device according to Claim 38, in which the means for extracting the light radiation includes an interruption of the layer capable of trapping the light radiation, by a material which is opaque with respect to the light radiation.

Claim 50 (Withdrawn): A device according to Claim 38, in which the support is a planar support, and the means for extracting the light radiation extends all the way around the zone of the support on which the biological element is positioned.

Claim 51 (Withdrawn): A device according to Claim 38, further comprising means for collecting the light radiation extracted from the layer capable of trapping the light radiation.

Claim 52 (Withdrawn): A device according to Claim 38, in which,
the support is a planar support comprising a plurality of zones for the positioning of a plurality of biological elements;

the layer of material capable of trapping the light radiation is divided up into as many parts as there are zones on the support;

each zone of the support is located in one of the parts;

the parts are separated from one another by means for preventing the light radiation from propagating from one part to another part; and

for each part of the layer, the support comprises means for extracting the light radiation trapped in the part, and further comprising means for collecting the light radiation extracted from the part and means for measuring the intensity of the light radiation collected by the collecting means.

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Claim 53 (Withdrawn): A device according to Claim 52, in which the layer capable of trapping the light radiation is supported by a layer of a material which is opaque with respect to the light radiation, and the parts of the layer capable of trapping the light radiation are separated by projections from the layer which is opaque with respect to the light radiation, extending into the thickness of the layer capable of trapping the light radiation.

Claim 54 (Currently Amended): A method for controlling establishment of a high-resistance seal between ~~at least one biological element and at least one zone of edges of a~~ through-opening made in a support by a patch-clamp technique, in which the biological element is labeled with a tracer that emits a light radiation, the support comprises a layer of a material capable of trapping the light radiation, and the ~~zone of the support~~ edges of the through-opening on which the biological element is ~~positioned~~ is sealed are located in [[a]] ~~the layer of a material capable of trapping the light radiation~~, the method comprising:

- a) ~~positioning~~ sealing the biological element on the ~~zone of the support~~ edges of the through-opening by creating a low pressure in the through-opening;
- b) measuring intensity of light radiation trapped in the layer; and
- c) ~~determining positioning~~ controlling sealing of the biological element by comparing the intensity thus measured with at least one reference value;

wherein a) [[,]] and b) ~~and c)~~ can be carried out successively or simultaneously.

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